

The purpose of forced busy (FB) state is to prevent outside people from calling into the system while Pool Administration is in progress, and getting a ringback signal. (Thus thinking that no one is present to answer the call.) Instead, the outside callers receive a busy signal and know that the CO lines are busy and will try again later. Thus, the signal returned to the caller is representative of the actual existing condition.

This process of busying-out CO lines continues (510, 511, 512, 513) until all CO lines of the system (i.e., CO1-COM) become idle and are placed in the Forced Busy state. When all lines in the system are in Forced Busy state and all stations in the system are in Forced Idle state the green LED at CAP station ST1 will go steady, 514, and a system idle audible alert tone is given to the user or administrator.

This is accomplished when the ATD receives the information that all CO lines are busy and in response sends TMA 312 a system idle command. The TMA 312 then sends the appropriate commands to TA 303-1 to cause the green LED to go steady and to output the system idle audible alert tone. The CAP station ST1 is thus out of the administration wait state and the administrator can now change the contents of various pools.

If the administrator wishes to administer another pool then the administrator enters the new pool number, in step 515, a digit at a time. The TA 303-1 receives these digits and sends them to TM 302-1 and TMA 312. The TMA 312 checks with the ATD to determine if the dialed number is a valid pool number. If an invalid pool number is entered an error tone is output at CAP station ST1. When a valid pool number is entered TMA 312 gets the CO lines associated with that pool code from table 602 and sends commands to TA 303-1, in step 516, to light the red LED next to each CO line in the selected pool.

The administrator can now add CO lines to the pool or delete lines from the pool. By pressing a line button, 517, next to a line already in the pool, as designated by a red LED which is on, that line is removed from the pool. Conversely, if the line button pressed, 517, is associated with a line not in the pool, as designated by a red LED which is off, that line is added to the pool. This is implemented by TA 303-1 reporting the button identification to TM 302-1 and TMA 312 which then appropriately deletes or adds the line to the pool in table 602. Then TMA 312 commands TA 303-1, step 518, to toggle the red LED next to the line button pressed.

Thereafter, the administrator can select another pool number and add lines to or delete lines from that pool, step 519, or can decide to exit the ADM POOL mode, step 508. If the administrator exits the ADM POOL mode by pressing the station mode switch, the TA 303-1 signals TM 302-1, TMA 312 of this request. In response, TMA sends a cancel force idle and a cancel CO line busy commands to each of TM 302-1 through 302-N and LM 307-2 through 307-M, respectively. The TMA then requests the ATD to update the tables of FIG. 6. The TMA then returns all LEDs at the CAP to the normal condition using commands sent to the TA (303-1 to 303-N). The system and stations sets are now available for normal communications.

What has been described is merely illustrative of our invention, other embodiments known to those skilled in the art could be utilized without departing from the spirit and scope of the present invention. For example, other arrangements of audible or visual alerting signals or tones associated with the various modes can be uti-

lized without deviating from our invention. Additionally, applications to other apparatus of a telephone or other communication systems other than the disclosed system are contemplated as being within the knowledge of one skilled in the art.

What is claimed is:

1. A communication system including a common controller unit connected to a plurality of communication apparatuses for controlling communicating over a plurality of communication facilities and further including an arrangement for administering a communication connection between said apparatuses and said facilities, said system comprising,
 - apparatus interface means responsive to control signals from said administering arrangement for enabling and disabling communications to a connected apparatus,
 - said administering arrangement including means responsive to a user input for initiating an administration mode to change a connection between a selected facility and a selected connected apparatus designated by said user input and for terminating said administration mode after said change is completed,
 - means responsive to an initiated administration mode and to an idle condition at said selected apparatus for sending a disable control signal to an interface means associated with said selected apparatus, and
 - means responsive to said user input for sending an enable control signal to the interface means associated with said selected apparatus after said change is completed.
2. The communication system of claim 1 wherein said initiating and terminating means includes
 - means for receiving a first user input for initiating said administering arrangement at connected apparatus selected by said first user input; and
 - means for receiving a second user input for designating said selected facility connection to be changed.
3. The communication system of claim 1 wherein said apparatuses includes terminal apparatus and facility apparatus, and wherein said apparatus interface means includes
 - a terminal apparatus interface means responsive to a forced idle disable control signal for disabling said terminal apparatus when said terminal apparatus becomes idle and for maintaining an idle condition thereafter, and
 - a facility apparatus interface means responsive to a forced busy disable control signal for disabling said facility apparatus when said facility apparatus becomes idle and for placing it in a busy condition thereafter.
4. The communication system of claim 3 wherein said user input initiates administration at said terminal apparatus.
5. The communication system of claim 1 wherein said initiating and terminating means includes
 - means for selecting a system administration mode at said controller unit, and
 - means for selecting a programming mode at said terminal apparatus, and wherein
 - said initiating and terminating means is responsive to the user first operating said administration mode selecting means and then operating said programming mode selecting means.
6. The communication system of claim 1